

ABSTRACT

A Ni-base directionally solidified superalloy and a Ni-base single-crystal superalloy, which have superior creep strength at a high temperature, consists essentially of from 5.0 percent by weight to 7.0 percent by weight of Al, from 4.0 percent by weight to 16.0 percent by weight of Ta + Nb + Ti, from 1.0 percent by weight to 4.5 percent by weight of Mo, from 4.0 percent by weight to 8.0 percent by weight of W, from 3.0 percent by weight to 8.0 percent by weight of Re, 2.0 percent by weight or less of Hf, 10.0 percent by weight or less of Cr, 15.0 percent by weight or less of Co, from 1.0 percent by weight to 4.0 percent by weight of Ru, 0.2 percent by weight or less of C, 0.03 percent by weight or less of B, and Ni and inescapable impurities as a balance. The superalloys can be used for a turbine blade, a turbine vane and the like of a jet engine, an industrial gas turbine and the like.